## **ABSTRACT**

Anti-human Mpl antibodies were prepared, and from these three types of antibodies with strong binding activity were selected. An expression system for single-chain antibodies derived from these selected antibodies was constructed using genetic engineering techniques. The anti-human Mpl antibodies and anti-human Mpl single-chain antibodies were assessed for TPO-like agonist activity using BaF3-human Mpl that proliferates TPO-dependently. It was found that while the anti-human Mpl antibodies did not exhibit agonistic activity, the anti-human Mpl single-chain antibodies showed agonistic activity.

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This shows that when screening for modified antibodies with agonistic activity, it is beneficial to determine agonistic activity after modifying antibodies with antigen-binding activity.